APRIL/MAY 2025

CCA21/FCA21/CCS21 — C++ AND DATA STRUCTURES

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Define data abstraction.
2. What is a Token?
3. Define operator overloading.
4. What is abstract class?
5. Define composite data type.
6. What is an ADT?
7. Write the acronym of BFS.
8. List the basic operations of binary search.
9. Write the benefits of hashing.
10. What is searching?

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write notes on C++ data types.

Or

(b) Explain in detail the expressions and their types.

12. (a) Expound on Inheritance.

Or

(b) List the rules for manipulating strings.

13. (a) Discuss in detail the double linked list.

Or

(b) Differentiate the stack and queue.

14. (a) List and explain any two basic operation on binary search.

Or

(b) Expound the in-order traversal.

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15. (a) Explain with example the bubble sort.

Or

(b) Discuss in detail the hashing.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain with example the function overloading.

17. Describe in detail on polymorphism.

18. Explicate the application of list (polynomial addition) with example.

19. Differentiate the BFS and DFS.

20. Explain with example the insertion sort.

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